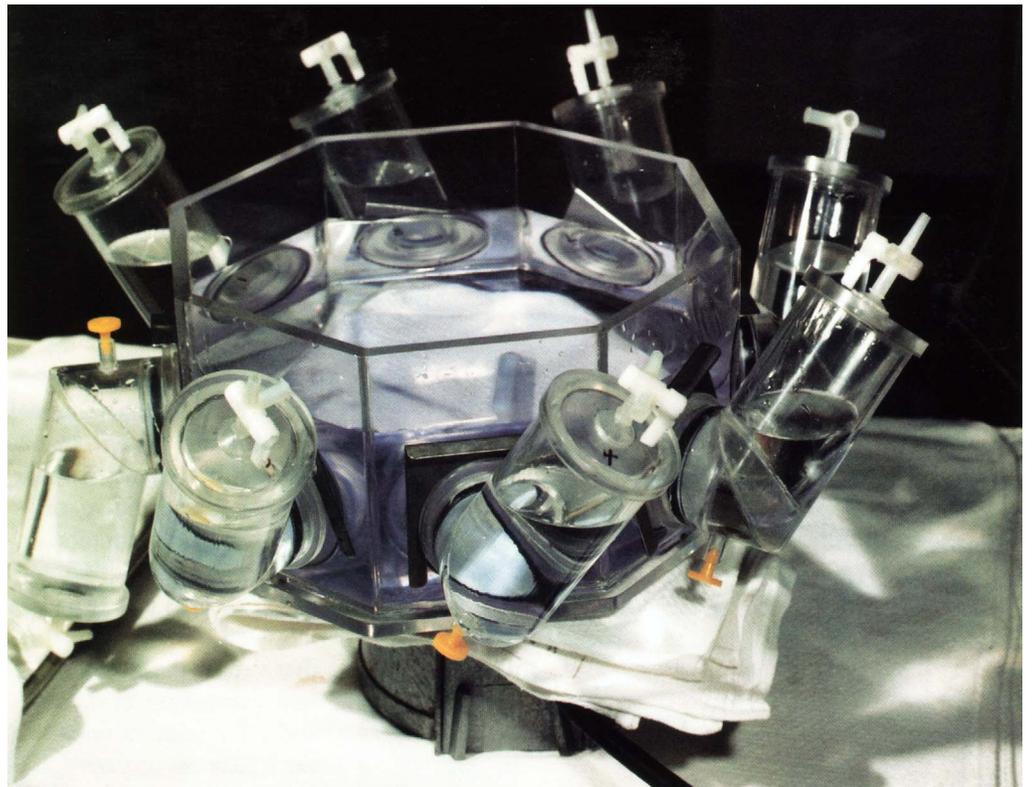


## Laboratory Tool

**B**elow, Dr. Timothy Morck and an assistant, researchers at the Veterans Administration (VA) Medical Center, Hampton, Virginia, are using a “cake box” apparatus developed for the VA by Langley Research Center.

VA medical researchers are investigating the possibility that the peritoneal membrane (the lining of the abdominal cavity) can absorb nutrients and thus provide an alternative route for nutrition when intestinal function is impaired. To test the permeability of membrane samples, they had built a small dialysis chamber, but it proved complicated and difficult to use. Since the Medical Center lacked the technical expertise to construct a larger, improved version of the chamber, hospital officials sought Langley’s help.



Langley undertook the task as a technology utilization project and engineering technician Bruce Little of the Fabrication Division was assigned the job. After he met with members of the VA staff and discussed the requirement, Little conceived the cake box design shown above. The apparatus consists of an octagonal chamber with eight smaller chambers attached and secured by O-ring seals. The design is simple, interchangeable and time controllable; it doubles the research capability of the earlier VA design. ▲